Interactive Teaching Methods in Education: the Experience of Socio-psychological and Communication Games with Schoolchildren and Students

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Abstract—**The article actualizes the problem of creativity in modern culture and education; the question about the importance of a creative component in the process of a person's establishment as an individual. The necessity of the creative interactive methods' application in training and education is shown in this paper; the examples of some gaming interactions inside the social group. Various games and psychological testing methods are offered as methods of developing communication skills among pupils and students. For each psychological game described in this article the authors hold the analysis of its general peculiarities which help to reveal the creative potential of university students and schoolchildren and to espy the individual traits of character which need to be developed and improved or refined. The description of the games' and psychological tests' practical application in the student groups of National Research University 'Moscow Power Engineering Institute' is given; and on the base of this experiment the authors come to the conclusion about the development of students' creative capabilities and making a creative environment with the use of psychological games during the classes.**

Keywords—creativity; education; interactive methods in education; educational games; psychodrama

I. INTRODUCTION

Creativity is one of the up-to-date exciting problems of the twenty-first century. Creativity has never been studied so thoroughly by philosophers, psychologists, sociologists and pedagogues, as in the era of unprecedented development of technology and the replacement of human skills by automatic systems. In this regard, there was a need for people thinking outside-the-box, and also for creative ideas. But, on the other hand, there is a risk of impoverishment and cessation of creative potential as millions of people can use someone else's creativity, modifying it, copying or turning it into final results. Creative potential can be revealed in the clearest way in science, technology, art, education. It is easier to open new horizons and to overcome stereotypes in these spheres.

When we talk about creativity, first of all, we mean great people: poets, painters, scientists, artists. However, each person is engaged in creativity in his life: even if he tries to perform his work mechanically, he brings something from his own behalf into it — trying to improve the working process as well as the result of his work. Wherever the aim of activity is born from the depths of consciousness, creativity takes place. When a person works with love, passion and inspiration, he becomes a master of his craft.

In the life of university students, creativity plays an important role not only in the learning process, but also in communication with peers. Creativity helps them to get closer, to understand each other better, to create a strong team connection and to find common interests. Students have a lot of wonderful memories about the process of creative activity.

Many sciences are engaged in the theme of creativity: philosophy, linguistics, sociology, psychology, etc. This paper highlights psychological methods and techniques that allow identifying the main character peculiarities and personal qualities of students, developing the strengths and creative potential of an individual.

Psychology is a science whose aim is to study the mechanisms of the human psyche's functioning. It examines the patterns of human behavior in various situations and the resulting thoughts, feelings and experiences which appear in these situations [1]. Psychology pays great attention to the special psychological games. These games aimed at developing the psychological qualities, properties, and processes of the personality in it; such experiments stimulate productive reflection and the formation of a value system. The psychological component plays an important role in education, as it is directly related to the person, his feelings, emotions, moral attitudes and building communication with the outside world. Psychological methods stimulate the full-fledged personal and intellectual development at each age stage, form the abilities for self-education, and promptly

prevent possible violations in the development of personality and his intellect.

This article depicts the application of various psychological techniques within a social group. According to the definition of S. Buhler, the main features of the group include: the relationship and interaction of its members; the steady nature of the roles that individuals play within the group, the separation of leaders; common goal and common activities; the existence of unity within the group; cohesion. G. Dirks emphasizes that changing one part of a group leads to the changes in the state of all other parts. In Russian psychology and sociology, a group is the sphere of revealing the capabilities of an individual, identifying its individuality, as well as the environment where an active member of society is formed [2].

II. PSYCHODRAMATIC GAMES

One of the most interesting types of psychological games is psychodrama. Psychodrama is an interactive method of psychotherapy and psychological counseling proposed by J. Moreno. In its original form, psychodrama was a therapeutic group exercise in which various states of a person's inner world were improvised for the purpose of the most profound self-analysis. Such activities develop an understanding of the emotional sphere, deepen and improve the skills of empathy. Psychological games expand the possibilities of communication, natural behavior and interaction with others.

However, psychodrama today is actively used not only in psychotherapy, but also in individual work; psychodrama elements are widespread in many areas of group communication. Any social community is an open system, i.e. alive, dynamic organism. To understand what is happening in the group at the moment, J. Moreno suggested using sociometry — a branch of social psychology that studies interpersonal relations and pays primary attention to quantitative measurements of sympathies and antipathies between participants [3]. As a universal measuring tool for assessing personal qualities, Moreno introduced the number of sympathies and antipathies to a particular person from his/her environment. In the simplest form, a sociometric experiment consists of the following: each person in a group is asked to think over a given question (criterion), for example, "with whom I would like to spend a weekend watching movies or cartoons?", then he is asked to come up and put his/her hand on the shoulder of the person who meets this criterion. As a result, the experimenter obtains a picture from which it is possible to determine what place each individual occupies in the group according to this criterion. One can see "stars of attraction" — people with whom many people would like to carry out this action, "stars of rejection" — those people with whom nobody wants to communicate; mutual positive and negative choices, dividing the group into subgroups, etc. The main individual indicator is the index of sociometric status — the properties of the individual to occupy a certain spatial position (locus) within the group. Since a person can influence people both positively and negatively, we can talk about positive and negative sociometric status. However, it is necessary to take into consideration that the same sociometric patterns, depending on the age of the respondents and the characteristics of the group, may have different psychological reasons, and it must be interpreted taking into account this factor.

In the USSR, a game called 'Gold and wooden chair' was widely spread among schoolchildren. The essence of the game is that the participants in turn stopped in front of two chairs and could choose the chair on which they would like to sit. The participant, who chose the 'gold' chair, listened about all the good things about himself that his peers found in him, and on the 'wooden' one the children learned about their negative traits of character. Investigating this game for three years, we could observe a general trend: basically, everyone tried to sit on the 'gold' chair and only a few — on the 'wooden' one. From this we can conclude that in early adolescence, falling on the period of middle and high school, children, as a rule, are not yet ready to hear critical judgments.

Let us take as an example the well-known psychological game called "Prosecutors and lawyers". In this game, you need to talk about the positive and negative traits of the person chosen for discussion. The group is divided into 'accusers' and 'defenders' of the 'defendant', so a person hears both positive and negative reviews immediately. This game was carried out by us in the classroom on the theory and practice of communication in higher education institutes — for example, in the National Research University "MPEI". During the game, you can observe the following situation: people are more relaxed about criticism. Some students even sought to hear criticism in order to find out what others think of them, and to analyze whether the assessment corresponds to their own personal ideas about their personal qualities.

Games of this kind help to know oneself and to rally the team; of course, when conducting these games it is worth considering the peculiarities of age psychology. The game 'Gold and wooden chair' does not traumatize the child's psyche, since participants voluntarily choose what qualities they would like to know about. It is difficult for children of school age to accept criticism; it is also difficult for them to evaluate their peers: often in such cases the assessments of others do not correspond to the real psychological portrait of a person. A sharply worded criticism in adolescents can lead to negative consequences for the object of criticism: unproductive reflection on only one trait of character; removal from the outside world, disruption of social ties in a group, and even mental disorders. It is children who are not forced to make a choice in favor of one or another assessment, but allow themselves to decide in what way the others will express an opinion about their personal qualities. For students this game is not very interesting, because it does not give an idea of the strengths and weaknesses of the individual at the same time. For senior students with a certain life experience who are able to listen to criticism and analyze it, the game "Prosecutors and Lawyers" is more suitable.

Let us take as an example a game that promotes better mutual understanding in a group, cohesion, development of the ability to listen and hear the interlocutor, and also expands the vocabulary of the participants. It is called

"Drawing of figures" and can be considered as a type of psychodrama. Participants sit back to each other in pairs; one of the resulting pairs is given a sheet of paper with figures and lines. The participant who received the picture should verbally describe what is drawn on his sheet, and the partner should try to reproduce the original. At the end of the exercise, they can change their roles. The task is complicated by the fact that participants do not have to say the names of the figures, selecting synonyms. For example, 'circle' – 'plate', 'triangle' – 'sloping roof', etc. To complicate the task further, they can call antonyms.

There is another effective creative game called 'Retelling'. This game helps to form the skill of accurate ability to retell the received information, to listen and to hear the interlocutor. It demonstrates in practice the level of communication barriers' influence on the effectiveness of communication. One of the group members is given a text with some information. The text is approximately of one A4 page (1500-1800 characters with spaces). It is desirable that the text should be interesting for the participants and it should contain verbal and digital information. The participant, who has got the text at the beginning, looks at it and prepares to retell it to the next participant. At the same time, it is necessary to plan the work in such a way that participants do not hear the text until their turn, or to ask all students to leave the audience and invite them one at a time, as during the exam.

Psychological testing is also the equally effective technique (if dealing with the qualified interpretation of the results). In particular, it is a widely used method for diagnosing mental states and personality traits, as well as diagnosing interpersonal relationships in a team. Teachers of NRU 'MPEI' conducted psychological tests both at the lessons on the subject "Pedagogy and Psychology of Higher Education" and in the course of special technical disciplines in order to identify the characteristics of character and personal characteristics of each of the students enrolled in the group. For example, during classes, before studying a new material in one of the technical disciplines, students in the group were offered a drawing test of the personality research 'House-Tree-Man' by J. Book, where students were asked to draw a house, a tree and a man on one sheet. With the help of detailed instructions for deciphering the results, students were able to learn new facts about their psychological state and personality traits. (It is worth noting that this test was conducted by a teacher who received additional education in the specialty 'Age Psychology', which allowed students to interpret their results correctly). At the "Pedagogy and Psychology of Higher School" classes taught for postgraduate students of the National Research University 'MPEI' the tests were conducted to identify the psychological properties of the personality, interpersonal relations in the group, and determine the locus of control for the individual [4].

III. CONCLUSION

It should be noted that for the methods described above there are certain criteria — reliability and validity. The degree of testing reliability depends on the elements of subjectivity in the ways of evaluating and interpreting the results, imperfect diagnostic methods, differences in the behavior of the experimenter, and other factors. K.M. Gurevich proposes to evaluate the reliability on three characteristics: the reliability of the measuring instrument itself in the experiment, the stability of the characteristic being studied, and constancy — the independence of the results from the experimenter's personality. The validity of the test is "a concept indicating to us what the test measures and how well it does that," according to A. Anastasi's definition [5]. There are four types of validity: performance criteria (number of completed works, performance, etc.), subjective criteria (different types of answers, reflecting the views and opinions of a person), physiological criteria (used to study the influence of the environment and various situations on the human psyche), the criterion of accidental factors (used when the purpose of the study is aimed at the presence or repetition of some random situational variable in relation to this individual). Also, the interpretation of the results of psychological diagnostics is determined by the theoretical views of the researchers and the question of the method validity cannot be unambiguously determined without consideration in the context of the theoretical positions of its creators.

It can be noted that all these exercises are held in an active and interesting way, they contribute to the formation of the participants' communicative skills, and the participants themselves, in turn, reveal the strengths and weaknesses of their abilities to communicate. Also, these exercises stimulate self-development, self-awareness as a person, self-improvement skills. "A significant role in the creation and use of the creative environment in the university is played by the personal factor. The main figure of scientific creativity in high school is the teacher"[6]. The development of the individual as a creator is greatly influenced by the group - the social environment (in which the person is located), the so-called microenvironment. In the group with a comfortable psychological climate in which the usual level of psychological "individual protection" decreases, the most complete personal fulfillment of the creative potential is provided. The moral and ethical norms of the group should stimulate the individual creativity, the search for truth, new forms of knowledge.

REFERENCES

[1] L. F. Il'icheva, P. N. Fedoseyev, S. M. Kovalev, V. G. Panov. Philosophical Encyclopedic Dictionary. M.: Soviet Encyclopedia, 1983.

[2] D.Y. Raygorodsky. Practical psychodiagnostics. Methods and tests. Textbooked. - Samara: Bakhrakh-M Publishing House, 2015, p.672.

[3] Moreno, Ya. L. Sociometry: Experimental Method and the Science of Society / Trans. from English A. Bokovikova. M .: Academic project, 2001.

[4] M.K. Akimova, K.M. Gurevich. Psychological diagnosis: Textbook for universities. SPb .: Peter, 2008 - p 652.

[5] Olennikova M.V. The best psychological tests. M .: AST; SPb .: Owl, 2011 - p 639.

[6] Kuzminov M.Yu., Kurilov S.N. Formation of the creative environment of the university: approaches and methods. Methodology in science and education: Materials of the All-Russian Conference of

Universities and Academic Institutes of the Russian Academy of Sciences. Moscow, March 30-31, 2017- Moscow: MSTU Publishing House. N.E. Bauman, 2017. - pp.194-197.